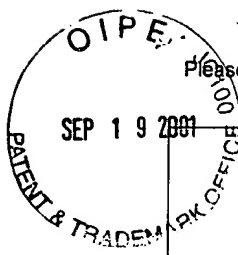


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PTO/SB/21 (08-00)

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# TRANSMITTAL FORM

(To be used for all correspondence after initial filing)

Application Number	09/831,855
Filing Date	August 23, 2001
First Named Inventor	Pratima Pai
Group Art Unit	
Examiner Name	
Attorney Docket No.	851663.426USPC


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## ENCLOSURES (check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Assignment Papers (for an Application)	<input type="checkbox"/> CD(s), Number of CD(s) _____
<input checked="" type="checkbox"/> Fee Attached	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to Group
<input checked="" type="checkbox"/> Amendment/Response	<input type="checkbox"/> Request for Corrected Filing Receipt	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> After Final	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Petition	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address	<input checked="" type="checkbox"/> Return Receipt Postcard
<input type="checkbox"/> Information Disclosure Statement; Form PTO-1449	<input type="checkbox"/> Declaration	<input type="checkbox"/> Additional Enclosure(s) (please identify below):
<input type="checkbox"/> Cited References	<input type="checkbox"/> Statement under 37 CFR 3.73(b)	_____
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Terminal Disclaimer	_____
<input type="checkbox"/> Response to Missing Parts under 37 C.F.R. 1.52 or 1.53	<input type="checkbox"/> Small Entity Statement	_____
<input type="checkbox"/> Response to Missing Parts/Incomplete Application	<input type="checkbox"/> Request for Refund	_____

Remarks

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Individual Name	E. Russell Tarleton	 00500 PATENT TRADEMARK OFFICE
Signature	<i>E. Russell Tarleton</i>	
Date	September 19, 2001	

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on the date specified below.		
Typed or printed name		
Signature		Date:



# FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT (\$) **400**

## Complete if Known

Application Number **09/831,855**  
 Filing Date **August 23, 2001**  
 First Named Inventor **Pratima Pai**  
 Examiner Name  
 Group Art Unit  
 Attorney Docket No. **851663.426USPC**

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## METHOD OF PAYMENT

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit Account Number  
 Deposit Account Name

**19-1090**

**Seed Intellectual Property Law Group PLLC**

- ☒ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17 and credit any overpayment to Deposit Account Number above.

☐ Applicant claims small entity status. See 37 CFR 1.27

2. ☒ Payment Enclosed:

☒ Check ☐ Credit card ☐ Money Order ☐ Other

## FEE CALCULATION

### 1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
101	710	201	355	Utility filing fee	
106	320	206	160	Design filing fee	
107	490	207	245	Plant filing fee	
108	710	208	355	Reissue filing fee	
114	150	214	75	Provisional filing fee	
SUBTOTAL (1)					(\$ 0)

### 2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
15	-20** = 0	X 18 = 0	
Independent Claims 8	-3** = 5	X 80 = 400	
Multiple Dependent		X = 0	

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
103	18	203	9	Claims in excess of 20
102	80	202	40	Independent claims in excess of 3
104	270	204	135	Multiple dependent claim, if not paid
109	80	209	40	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$ 400)

\*\*or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

### 3. ADDITIONAL FEES

Large Entity		Small		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
105	130	205	65	Surcharge - late filing fee or oath
127	50	227	25	Surcharge - late provisional filing fee or cover sheet.
139	130	139	130	Non-English specification
147	2,520	147	2,520	For filing a request for ex parte reexamination
112	920*	112	920*	Requesting publication of SIR prior to Examiner action
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action
115	110	215	55	Extension for reply within first month
116	390	216	195	Extension for reply within second month
117	890	217	445	Extension for reply within third month
118	1,390	218	695	Extension for reply within fourth month
128	1,890	228	945	Extension for reply within fifth month
119	310	219	155	Notice of Appeal
120	310	220	155	Filing a brief in support of an appeal
121	270	221	135	Request for oral hearing
138	1,510	138	1,510	Petition to institute a public use proceeding
140	110	240	55	Petition to revive - unavoidable
141	1,240	241	620	Petition to revive - unintentional
142	1,240	242	620	Utility issue fee (or reissue)
143	440	243	220	Design issue fee
144	600	244	300	Plant issue fee
122	130	122	130	Petitions to the Commissioner
123	130	123	130	Petitions related to provisional applications
126	180	126	180	Submission of Information Disclosure Stmt
581	40	581	40	Recording each patent assignment per property (times number of properties)
146	710	246	355	Filing a submission after final rejection (37 CFR § 1.129(a))
149	710	249	355	For each additional invention to be examined (37 CFR § 1.129(b))
179	710	279	355	Request for Continued Examination (RCE)
169	900	169	900	Request for expedited examination of a design application

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 0)

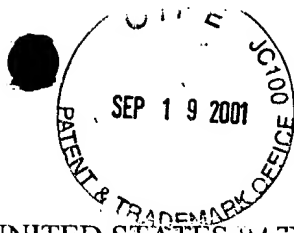
## SUBMITTED BY

Name (Print/Type) **E. Russell Tarleton** Registration No. **31,800**  
 Firm Name/Address  
 Signature *E. Russell Tarleton* Date **September 19, 2001**



00500

PATENT TRADEMARK OFFICE



EXRESS MAIL NO. EL897870199US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Pratima Pai et al.  
Application No. : 09/831,855  
Filed : August 23, 2001  
For : METHODS OF EFFICIENT IMPLEMENTATION OF TRELLIS  
BASED SPECTRAL SHAPING WITH LOOKAHEAD

#5/A  
1. M. Auclins  
11-6-01

Docket No. : 851663.426USPC  
Date : September 19, 2001

Commissioner for Patents  
Washington, DC 20231

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PRELIMINARY AMENDMENT

Commissioner for Patents:

Please amend the above-identified application as follows:

In the Specification:

Paragraph beginning at line 7 of page 1 has been amended as follows:

A1

This invention relates to systems and methods for spectral shaping of signals in communications systems, and it is particularly applicable to data communication equipment like a modem.

Paragraph beginning at line 6 of page 2 has been amended as follows:

A2

In accordance with an embodiment of the present invention, there is provided a method of coding digital data for transmission according to a trellis coding system having a predetermined number of (N) states and a predetermined number of (M) state transitions from each state, wherein the data is arranged in a series of frames, a state is associated with each frame to determine a coding strategy for the frame, and a look-ahead depth (D) representing a number of data frames is selected, including: